

INL receives 500-kW diesel fuel processor to accelerate development of emerging fuel technologies

A new diesel fuel processor will enable Idaho National Laboratory researchers to accelerate the development of emerging energy and alternative fuels technologies.

INL leaders joined management from SOFCo-EFS Holdings LLC, the U.S. Department of Energy (DOE) and the U.S. Navys Office of Naval Research (ONR) on Sept. 28 in the ceremonial transfer of a 500-kiloWatt integrated fuel processor to INL. The equipment and associated research are valued at more than \$14 million.

"We are extremely pleased to receive this equipment in support of our energy and alternative fuels research," said INL Laboratory Director John Grossenbacher. "Our leadership role in a wide range of energy systems and technologies is greatly enhanced by this type of partnership and collaboration."

The new equipment will extend the test capability of INL's diesel reformer facility and accelerate the development of emerging fuel processing technologies. It also achieves a significant INL collaboration with private industry and the U.S. Navy to develop and test technology with private sector, military and other government sector uses.

Testing of the unit was performed at INL in 2004 and represented the culmination of a six-year program to demonstrate NATO F-76 diesel fuel as a potential fuel for fuel cells. NATO F-76 is the fuel of choice for military applications because it is readily available throughout the world.

The Navy intends to integrate the diesel fuel-processing technology developed under this program with fuel cell systems to satisfy ship service power needs in the future. Use of fuel cell technology allows power generation equipment to be distributed throughout the ship, increasing the survivability of Navy vessels.

"We are pleased to have had a role in expanding the test capability of the INL facility," said Rodger McKain, president of SOFCo-EFS. "We look forward to continued collaborative efforts in the future."

Funding for the project was provided by the Office of Naval Research and BWX Technologies, Inc. (BWXT), which manages SOFCo-EFS. The 500-kW IFP is the largest fuel processor of its kind.

SOFCo-EFS Holdings LLC is headquartered in Alliance, Ohio, and managed by BWXT. Both SOFCo-EFS and BWXT are owned by McDermott International. SOFCo-EFS develops planar solid oxide fuel cell components for stationary and mobile power systems, as well as gaseous and liquid fuel processors that support a broad range of fuel cell applications.

The versatile fuel processing technology is being integrated into solid oxide fuel cell systems being developed by SOFCo-EFS as well as other industry stakeholders.

[SOFCo Web site](#)

[500-hour fuel cell demonstration](#)

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[Feature Archive](#)



Christmas came early as INL, its collaborators and partners celebrated the transfer of \$14 million worth of fuel processing equipment to the laboratory's Diesel Reformer Facility. Front row from left, Joe Palmer, Anthony Nickens (Office of Naval Research), David Jenkins (INL Fossil Energy Department), John Grossenbacher (INL Laboratory Director) and Lyman Frost (INL Fossil Energy Department). Back row, from left are Bob Carrington (INL Fossil Energy Department), Bob Cherry (INL Fossil Energy Department), Rodger McKain (President, SOFCo-EFS) and John Conner (INL Fossil Energy Department). (INL photo) [Video of ceremony \(featuring SOFCo President Rodger McKain and INL Lab Director John Grossenbacher\)](#) 2.1MB .wmv